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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RAWLINGS, STEPHEN L	

ART UNIT	PAPER NUMBER
1642	

DATE MAILED: 11/04/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/619,310	THASTRUP ET AL.	
	Examiner	Art Unit	
	Stephen L. Rawlings, Ph.D.	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2003* .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-40* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. The amendment filed August 18, 2003 in Paper No. 18 is acknowledged and has been entered. Claims 12 and 23 have been amended. Claims 38-40 have been added.

2. The election with traverse filed August 18, 2003 as part of Paper No. 18 is acknowledged and has been entered.

3. The restriction set forth in the Office action mailed September 11, 2001 (Paper No. 4) is withdrawn.

4. Claims 1-40 are pending in the application and are currently subject to the following restriction.

Election/Restrictions

5. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1-4 and 6, insofar as the claims are drawn to a fluorescent protein derived from *Renilla reniformis*, classified in 530, subclass 350.

Groups II-V. Claims 1-9, 23-25, 32, and 38, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is leucine and wherein said chromophore of said protein consists of the sequence serine-tyrosine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of

the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups II-V, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups V-IX. Claims 1-9, 23-26, 32, and 39, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is leucine and wherein said chromophore of said protein consists of the sequence serine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups V-IX, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups X-XIII. Claims 1-9, 23-25, 32, and 38, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is leucine and wherein said chromophore of said protein consists of the sequence threonine-tyrosine-glycine at positions 65-67, or a fusion

compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups X-XIII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XIV-XVII. Claims 1-5, 8, 9, 23-26, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is valine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XIV-XVII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XVIII-XXI. Claims 1-5, 8, 9, 23-26, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green

fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is isoleucine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XVIII-XXI, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XXII-XXV. Claims 1-5, 8, 9, 23-26, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is alanine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XXII-XXV, Applicants may do so by specifically identifying the polypeptide,

i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Group XXVI-XXIX. Claims 1-5, 8, 9, 23-26, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is glycine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XXVI-XXIX, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XXX-XXXIII. Claims 1-4, 8, 9, 23, 24, 26, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof,

(b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XXX-XXXIII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XXXIV-XXXVII. Claims 1-4, 8, 9, 23, 24, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence serine-tyrosine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XXXIV-XXXVII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XXXVIII-XLI. Claims 1-4, 8, 9, 23, 24, 26, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea*

green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence serine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XXXVIII-XLI, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XLII-XLV. Claims 1-4, 8, 9, 23, 24, 26, and 32, insofar as the claims are drawn to a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence threonine-tyrosine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of

the amino acids of said chromophore have been substituted by another, classified in 530, subclass 350.

Note: If Applicants wish to elect one of the inventions of groups XLII-XLV, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Group XLVI. Claims 10 and 12-17, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Renilla reniformis*, a DNA construct comprising said nucleic acid molecule, a host transformed with said DNA construct, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Groups XLVII-L. Claims 10-17, 27, 28, 30, 31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is leucine and wherein said chromophore of said protein consists of the sequence serine-tyrosine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host,

classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups XLVII-L, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LI-LIV. Claims 10-17, 27-31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is leucine and wherein said chromophore of said protein consists of the sequence serine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LI-LIV, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LV-LVIII. Claims 10-17, 27, 28, 30, 31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is leucine and wherein said chromophore of said protein consists of the sequence threonine-tyrosine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LV-LVIII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LIX-LXII. Claims 10, 12-17, 27-31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is valine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting

of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LIX-LXII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LXIII-LXVI. Claims 10, 12-17, 27-31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is isoleucine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host,

classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LXIII-LXVI, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LXVII-LXX. Claims 10, 12-17, 27-31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is alanine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LXVII-LXX, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Group LXXI-LXXIV. Claims 10, 12-17, 27-31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is glycine and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LXXI-LXXIV, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LXXV-LXXVIII. Claims 10, 12-17, 27, 29-31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence threonine-histidine-glycine at positions 65-67, or

a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LXXV-LXXVIII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LXXIX-LXXXII. Claims 10-17, 27, 30, 31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence serine-tyrosine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector

comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LXXIX-LXXXII, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LXXXIII-LXXXVI. Claims 10-17, 27, 29-31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence serine-histidine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LXXXIII-LXXXVI, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups LXXXVII-XC. Claims 10-17, 27, 30, 31, and 33, insofar as the claims are drawn to a nucleic acid molecule encoding a fluorescent protein derived from *Aequorea victorea* green fluorescent protein (GFP), wherein the amino acid of said protein at the first amino acid position preceding the chromophore of said protein is substituted by another amino acid, which is *not* selected from the group consisting of leucine, valine, isoleucine, alanine, and glycine, and wherein said chromophore of said protein consists of the sequence threonine-tyrosine-glycine at positions 65-67, or a fusion compound comprising said protein, wherein said protein is linked to a polypeptide selected from the group consisting of (a) protein kinase A, or the catalytic subunit thereof, (b) protein kinase C, or the catalytic subunit thereof, (c) Erk1, and (d) a cytoskeletal element, or said fluorescent protein in which one or more of the amino acids of said chromophore have been substituted by another, a DNA construct or expression vector comprising said nucleic acid molecule, a host transformed with said DNA construct, a host cell comprising said vector, and a process for preparing a polypeptide comprising cultivating said host, classified in 536, subclass 23.5, class 435, subclass 320.1, class 435, subclass 325+, and class 435, subclass 69.1.

Note: If Applicants wish to elect one of the inventions of groups LXXXVII-XC, Applicants may do so by specifically identifying the polypeptide, i.e., (a), (b), (c), or (d), as indicated above, to which the claims are to be drawn.

Groups XCI-CXXXV. Claim 18, insofar as the claim is drawn to an assay for measuring protein kinase activity comprising adding a biological sample

and a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, classified in class 435, subclass 15.

Note: If Applicants wish to elect one of the inventions of groups XCI-CXXXV, Applicants may do so by specifically identifying a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, as set forth above, to which the claims are to be drawn.

Groups CXXXVI-CLXXX. Claim 18, insofar as the claim is drawn to an assay for measuring protein phosphatase activity comprising adding a biological sample and a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, classified in class 435, subclass 21.

Note: If Applicants wish to elect one of the inventions of groups CXXXVI-CLXXX, Applicants may do so by specifically identifying a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, as set forth above, to which the claims are to be drawn.

Groups CLXXXI-CCXXV. Claim 19, insofar as the claim is drawn to an assay for measuring metabolic activity, wherein said metabolic activity is protein kinase activity, comprising using a host cell transformed with a DNA construct comprising a nucleic acid molecule encoding a fluorescent protein, wherein said host cell is selected from the group consisting of the host cells of groups XLVI-XC, classified, for example, in class 435, subclass 362.

Note: If Applicants wish to elect one of the inventions of groups CLXXXI-CCXXV, Applicants may do so by specifically identifying a host cell selected from the group consisting of the host cells of groups XLVI-XC, as set forth above, to which the claims are to be drawn.

Groups CCXXVI-CCLXX. Claim 19, insofar as the claim is drawn to an assay for measuring metabolic activity, wherein said metabolic activity is protein phosphatase activity, comprising using a host cell transformed with a DNA construct comprising a nucleic acid molecule encoding a fluorescent protein, wherein said host cell is selected from the group consisting of the host cells of groups XLVI-XC, classified, for example, in class 435, subclass 362.

Note: If Applicants wish to elect one of the inventions of groups CCXXVI-CCLXX, Applicants may do so by specifically identifying a host cell selected from the group consisting of the host cells of groups XLVI-XC, as set forth above, to which the claims are to be drawn.

Groups CCLXXI-CCCXV. Claims 20, 21, and 34-37, insofar as the claims are drawn to an assay for measuring or monitoring gene expression, or detecting the expression of a protein encoded by said gene, wherein said assay comprises measuring the expression of a reporter for gene expression comprising a nucleic acid molecule encoding a fluorescent protein, wherein said protein is selected from the group consisting of the fluorescent proteins of groups I-XLV, classified, for example, in class 435, subclass 6.

Note: If Applicants wish to elect one of the inventions of groups CCLXXI-CCCXV, Applicants may do so by specifically identifying a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, as set forth above, to which the claims are to be drawn.

Groups CCCXVI-CCCLX. Claim 22, insofar as the claim is drawn to a method for visualizing organelles in living cells, wherein said method comprises

tagging an organelle with a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, classified, for example, in class 435, subclass 29.

Note: If Applicants wish to elect one of the inventions of groups CCCXVI-CCCLX, Applicants may do so by specifically identifying a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, as set forth above, to which the claims are to be drawn.

Groups CCCLXI-CDV. Claim 22, insofar as the claim is drawn to a method for visualizing processes in living cells, wherein said method comprises tagging a process with a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, classified, for example, in class 435, subclass 29.

Note: If Applicants wish to elect one of the inventions of groups CCCLXI-CDV, Applicants may do so by specifically identifying a fluorescent protein selected from the group consisting of the fluorescent proteins of groups I-XLV, as set forth above, to which the claims are to be drawn.

6. The inventions are distinct, each from the other because of the following reasons:

The inventions in groups I-XC are disclosed as biologically and chemically distinct, unrelated in structure and/or function, and/or made by and/or used in different methods, and therefore the claimed products are distinct.

The inventions in groups XCI-CDV are disclosed as materially different methods that differ at least in objectives, method steps, reagents and/or doses and/or schedules used, response variables, assays for end products and/or results, and criteria for success, and therefore the claimed methods are distinct.

Inventions in groups I-XLV and groups XCI-CLXXX are related as product and process of use. The inventions can be shown to be distinct if either or both of the

following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed, namely the protein can be used in a materially different process of using that product, such the process of using the polypeptide as an immunogen to produce a reagent antibody that specifically binds the polypeptide.

Inventions in groups XLVI-XC and groups XCI-CLXXX are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed, namely the host cell can be used in a materially different process of using that product, such the process of using the host cell to produce the polypeptide encoded by the expression vector by which the host cell is transformed.

The inventions in groups I-XLV and groups CLXXXI-CDV are not at all related because the products of groups I-XLV are not specifically used in any of the steps of the claimed methods in groups CLXXXI-CDV.

The inventions in groups XLVI-XC and groups XCI-CLXXX are not at all related because the products of groups XLVI-XC are not specifically used in any of the steps of the claimed methods in groups XCI-CLXXX.

7. Because these inventions are distinct for the reasons given above and also because the search required for any one group is not required for any other group and/or the inventions have acquired a separate status in the art as shown by their different classification or their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

8. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

9. Claims 1-4, 8, 23, and 27 are linking claims. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s). Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

10. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the

requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen L. Rawlings, Ph.D. whose telephone number is (703) 305-3008. The examiner can normally be reached on Monday-Friday, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony C. Caputa, Ph.D. can be reached on (703) 308-3995. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Stephen L. Rawlings, Ph.D.
Examiner
Art Unit 1642

slr
October 28, 2003

ANTHONY C. CAPUTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600